



Important Dates and Deadlines

GSNP Awards Session: Monday, March 5, 8:00am, LACC 510

GSNP Business Meeting: Tuesday, March 6, 5:30pm, LACC 502B

Fellowship nominations deadline: Friday, June 1, 2018

Leo P. Kadanoff Prize nomination deadline: Friday, June 1, 2018

Lars Onsager Prize nomination deadline: Friday, June 1, 2018

GSNP Dissertation Award nomination deadline: Tuesday, July 31, 2018

Message from the Chair

The March Meeting is rapidly approaching, and I'm looking forward to seeing all of the exciting research on statistical and nonlinear physics presented by our members. The March Meeting also signals a changing of the guard in the GSNP leadership. I have been honored to have been the Chair for the past year (and Chair-Elect and Vice Chair the two years before that), but at the end of the March Meeting, I will pass on the leadership of our group to Greg Huber. Greg has done a great job organizing the GSNP contributions to the March Meeting this year, and I'm sure he'll lead the GSNP to a productive 2018. I'm also excited to welcome our newest members to the Executive Committee. Mark Shattuck has already been quite active serving the GSNP in various roles, and this year he finally gets a title — Vice Chair. He'll be joined by our new Members-at-Large, Danielle Bassett and Nicholas Ouellette. Please welcome Mark, Dani, and Nick to their new roles and start sending them suggestions! New additions mean that I also have the bittersweet task of thanking our outgoing Executive Committee members for their valuable service. Adilson Motter is finishing up four years as part of the Chair-line, and Cynthia Reichhardt and Uwe Tauber are finishing three years as Members-at-Large. Please join me in thanking them for the time and effort they have committed to our unit.

When I was elected three years ago, many of us were uncertain how the GSNP would fare in the wake of the establishment of GSOFT. I'm happy to report that the GSNP has not just survived; we have thrived — adding over 400 members and inching closer to numbers that would allow us to become a Division. Much of the growth has come from scientists early in their careers, attesting to the excitement and impact of the various research areas within statistical and nonlinear physics. Membership growth leads to more Fellowships for the GSNP, more invited sessions at the March Meeting, and more influence over the broader activities of the APS, so please continue to urge your students, post-docs, and colleagues to join.

We've had some exciting developments within the GSNP this past year. The latest news is that we have been approved to establish the Leo P. Kadanoff Prize honoring scientists (experimental, theoretical, and computational) whose work has opened new vistas for statistical and/or nonlinear physics. Greg Huber was instrumental in getting this Prize off the ground, and Dan Lathrop is taking a leading role in the fundraising to endow the Prize. We will be soliciting your nominations for the 2019 Prize this Spring. This year also marks the first year for the Dissertation Award in Statistical and Nonlinear Physics, generously sponsored by the AIP journal *Chaos* and made possible through the hard work of my predecessor, Adilson Motter. These new awards are in addition to our student and post-doctoral speaker awards and the Lars Onsager Prize, and we will continue to develop more ideas to honor our members and promote statistical and nonlinear physics.

Best wishes for a healthy and productive 2018,
David Egolf

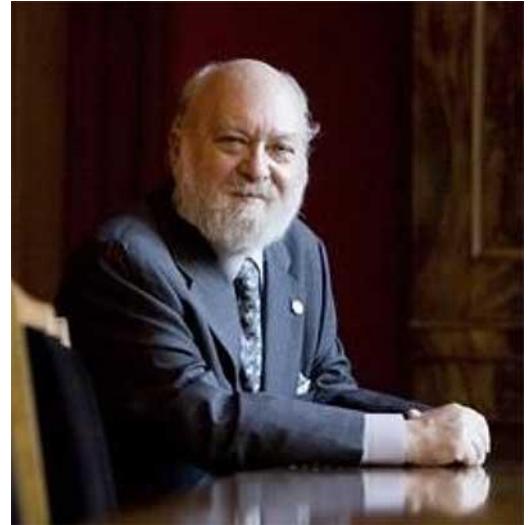
Leo P. Kadanoff Prize and Fundraising

APS and the GSNP are pleased to announce the establishment of the Leo P. Kadanoff Prize to honor the memory and celebrate the legacy of one of the giants in the field of statistical and nonlinear physics. We have launched an effort to endow this Prize and invite you to consider supporting it.

APS has launched a \$300,000 endowment campaign to allow the Kadanoff Prize to be given in perpetuity. We are enormously grateful to family members, friends, and colleagues of Leo Kadanoff who have already raised commitments totaling over \$100,000 toward the endowment goal and are currently seeking the balance — with projected completion in 2019.

Gifts of any amount are appreciated and recognized on the [Kadanoff Prize website](#). Moreover, gifts of \$1,000 or more will help us reach our goal and ensure that the first Kadanoff Prize will be awarded at the combined APS March/April Meeting 2019 in Boston.

Nominations for the 2019 Leo P. Kadanoff Prize are due by Friday, June 1, 2018. Please [nominate a deserving scientist](#) (experimental, theoretical, and computational) whose work has opened new vistas for statistical and/or nonlinear physics.



Lars Onsager Prize

The Lars Onsager Prize was established to recognize outstanding research in theoretical statistical physics including the quantum fluids. The prize consists of \$10,000 as well as a certificate citing the contribution made by the recipient. It has been presented annually since 1997. The 2018 recipient is **Subir Sachdev** of Harvard University "for his seminal contributions to the theory of quantum phase transitions, quantum magnetism, and fractionalized spin liquids, and for his leadership in the physics community."

Nominations for the 2019 Lars Onsager Prize are due by Friday, June 1, 2018, and we encourage all members of the GSNP to consider [nominating a deserving colleague](#).

GSNP Dissertation Award

This year we are awarding the inaugural Dissertation Award in Statistical and Nonlinear Physics. This award recognizes exceptional young scientists who have performed original doctoral thesis work of outstanding scientific quality in the area of statistical and nonlinear physics. The selection committee, chaired by Adilson Motter, has chosen **Alison Koser Patteson** as the winner for 2018 "for outstanding doctoral thesis work on non-equilibrium systems at the interface of active matter and fluid dynamics." Alison earned her Ph.D. at the University of Pennsylvania working with Professor Paolo Arratia. Please join us in congratulating her for this wonderful achievement.

This annual award consists of \$2,000, a certificate, travel reimbursement (up to \$750 for North America, \$1,500 overseas), and a registration waiver to receive the award and give an invited talk at the APS March Meeting. The invited talk this year will be at the opening session for the March Meeting on Monday at 8:00am. [Nominations for next year's award](#) are due July 31, 2018.

New APS Fellows

Each year, the GSNP Fellowship Committee reviews nominations for APS Fellowship and makes recommendations to the APS. The total number of APS Fellows who may be elected in a given year is limited to one-half of one percent of the total APS (non-student) membership. Obviously, the selection process is quite competitive. This year's committee, chaired by Dan Lathrop, selected four new Fellows who are all exceptionally deserving. Our newest Fellows are:

Thomas Carroll, U.S. Naval Research Laboratory, "For research in nonlinear dynamics including experimental detection of transient chaos in magnetic spin-wave materials, synchronization of chaotic systems, applications of chaos to communications and radar, and the application of phase space techniques to signal analysis."

Michelle Girvan, University of Maryland, "For seminal contributions to the nonlinear and statistical physics of complex networks, including the characterization of network structures and dynamics, and interdisciplinary applications."

Bjoern Hof, Institute of Science and Technology, Austria, "For innovative experiments illuminating the nonlinear structures within shear turbulence, providing a precise, quantitative characterization of the onset of turbulence in pipe and related flows."

Corey O'Hern, Yale University, "For computational and theoretical studies elucidating the microstate statistics, protocol dependence, and structure of the configuration space of jammed packings."

The nomination process is already open for the next class of APS Fellows, and the deadline is June 1, 2018. We encourage you to [nominate a deserving colleague](#).



25 Years of Physical Review E

2018 marks the 25th anniversary of the first publication of Physical Review E. This journal has been an important outlet for advancing research in statistical, nonlinear, biological, and soft matter physics. In many ways, PRE and the GSNP have grown together, as we are celebrating the 20th anniversary of our own founding. We congratulate PRE and thank them for their service to our community.

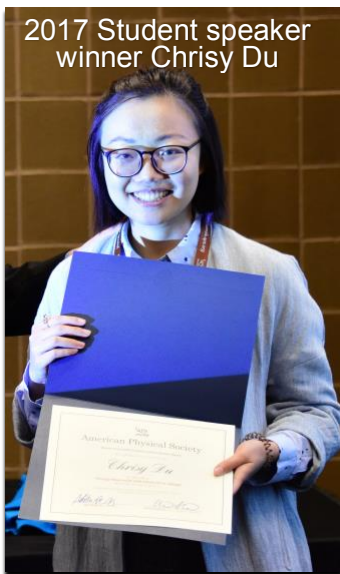
GSNP Election Results

We are pleased to announce the results of the election and the newest members of the GSNP Executive Committee. **Mark Shattuck** of The City College of New York will be the new Vice Chair. After a year as Vice Chair, Mark will serve a year as Chair Elect, a year as Chair, and finally a year as Past Chair.

Danielle Bassett of the University of Pennsylvania and **Nicholas Ouellette** of Stanford University have been elected to serve 3-year terms as members-at-large.

The elections were close, and we would like to thank the other candidates. This year's nominations committee was chaired by David Egolf.

Student and Postdoctoral Speaker Awards



Each year the GSNP awards a Student Speaker Award and a Postdoctoral Speaker Award for the best contributed talks at the March Meeting by a graduate student and a post-doc, respectively, in the area of statistical and nonlinear physics. Five finalists are chosen for each award, and all finalists receive travel support of \$500 to attend the March Meeting. The winner will also receive a \$1,000 award and each of the other four finalists will receive \$500 awards. Prizes will be announced at the GSNP Business Meeting. This year's finalist selection committee, chaired by Chris Santangelo, has selected the following finalists:

Students:

Arif Abdullah, University of Illinois, Urbana
Adarsh Ganesan, University of Cambridge
Erin Teich, University of Michigan, Ann Arbor
Christopher Lynn, University of Pennsylvania
Daniel Case, Northwestern University

Post-docs:

Armand Boroman, Yale University
Benjamin Loewe, Syracuse University
Sheng Mao, Princeton University
Vikram Rathee, Georgetown University
Daniel Sussman, Syracuse University

Please join us for the finalists' talks in session A48 in Room 510 on Monday at 8am at the March Meeting. We will honor the finalists and announce the winners at the GSNP Business Meeting on Tuesday.



GSNP Executive Committee (March 9, 2018 – March 8, 2019)

Chair: Greg Huber, University of California, Santa Barbara, huber@kitp.ucsb.edu

Chair-Elect: Daniel Lathrop, University of Maryland, lathrop@umd.edu

Vice Chair: Mark Shattuck, City College of New York, shattuck@ccny.cuny.edu

Secretary/Treasurer: Christian Santangelo, UMass, Amherst, csantang@physics.umass.edu

Past Chair: David Egolf, Georgetown University, dae3@georgetown.edu

Members-at-Large:

Aparna Baskaran, Brandeis University, term ends March, 2019

Laura Clarke, North Carolina State University, term ends March, 2019

Arshad Kudrolli, Clark University, term ends March, 2020

M. Lisa Manning, Syracuse University, term ends March, 2020

Danielle Bassett, University of Pennsylvania, term ends March, 2021

Nicholas Ouellette, Stanford University, term ends March, 2021

2018 APS March Meeting

The March Meeting this year will take place on March 5-9 at the Los Angeles Convention Center. Once again, your contributed and invited talks will showcase the innovation and broad applicability of the area of nonlinear and statistical physics. GSNP-sponsored invited, focus, and contributed sessions span a vast array of topics, and it is quite an endeavor to put it all together; a special thanks goes to Greg Huber, the GSNP Program Chair this year. The following list of the GSNP-sponsored invited sessions is just a small sample of the variety of topics in our sessions:

A48: GSNP Student and Post-doc Prize Session (Room: 510)

C58. Large Deviations and the Butterfly Effect (Room: Petree Hall C)

E42. Chemotaxis Meets Physiology (Room: 502B)

F16. Energy Flows in The Climate System (Room: 305)

F59. Recent Advances in Single Polymer Dynamics (Room: Petree Hall D)

H42. Physical Approaches to Collective Cell Motility (Room: 502B)

L04. Lars Onsager Prize (Room: 151)

L42. Physics of Life (Room: 502B)

R42. Progress in Quantum Thermodynamics (Room: 502B)

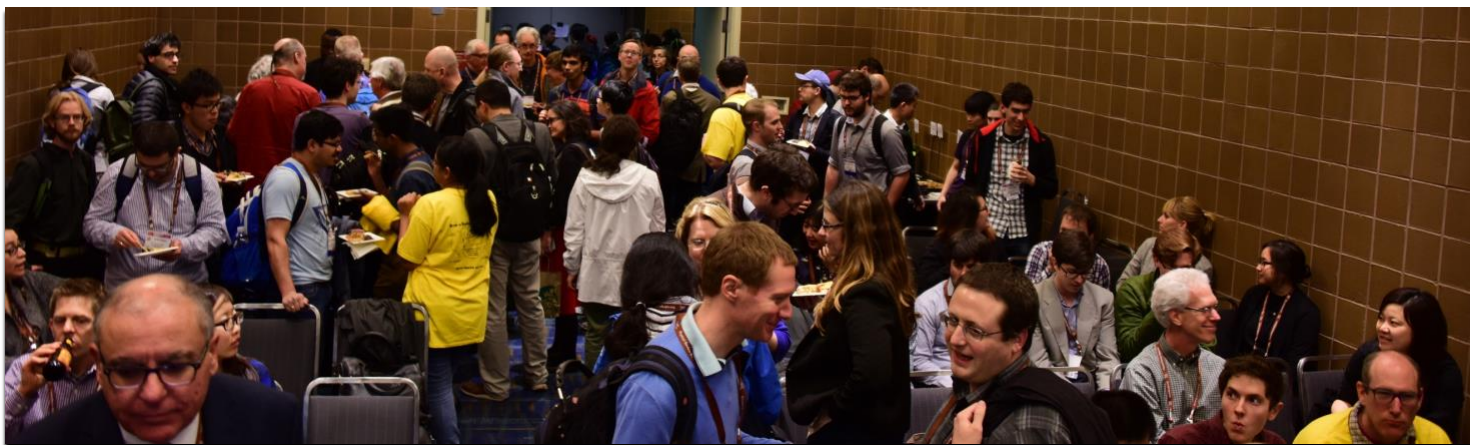
R59. Athermal and Statistical Mechanics (Room: Petree Hall D)

X42. Topology, Geometry, and Physics of Elastic Networks (Room: 502B)

Y42. Spatio-temporal dynamics of complex networks: From mean field to large deviations (Room: 502B)

Also, be sure to come to the GSNP Business Meeting to enjoy some refreshments, mingle with friends and colleagues, honor the new Fellows and award winners, and meet the Executive Committee members:

GSNP Business Meeting (Room: 502B) Tuesday, March 6, 5:30pm



GSNP Membership Drive (with t-shirts!)

Please encourage your colleagues, students, and post-docs to join the GSNP. A larger membership means more Fellows, more invited sessions, more funds to spend on our members, and greater visibility and influence within the APS. Anyone who joins at the March Meeting gets their first year for free. (Students and post-docs can join for free any time by contacting the GSNP secretary/treasurer.) Also, all GSNP members, new and old, can pick up a **free t-shirt** from the GSNP table outside room 510 (while they last).